UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R048BY005NM

Site Name: Mountain Meadow

Precipitation or Climate Zone: 16 to 30 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on basins and valleys and below seeps and springs on mountainside slopes. Drainages associated with the site are not dissected and allow the water to fan out. This results in a high water table and even some surface water in the spring and summer. Slopes average less than 3 percent but may range up to 15 to 20 percent when associated with springs and seeps. Elevation ranges from 7,400 to 9,500 feet above sea level.

Land Form:

1. Mountain slope
2. Mountain valley
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	7,400	9,500
Slope (percent)	3	20
Water Table Depth (inches)	4	60

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

The climate is characterized by cold, wet winters in which more than 50 percent of the total annual precipitation is received during the winter. The balance of the precipitation is received in the summer months, some of it in the form of high intensity thunderstorms. Average annual precipitation is about 22 inches but ranges from 16 to 30 inches and yearly fluctuations are common.

The average frost-free period is about 80 days but ranges from 60 days at the highest elevations to 110 days at the lowest elevations; however, the period lengths vary. The average last killing frost in the spring occurs about June 10th. The average first killing frost in the fall occurs about September 20th. Average annual air temperature is 22.6 degrees F in January and 64.5 degrees F in July with extremes ranging from -40 degrees F to 95 degrees F.

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	67	93
Freeze-free period (days):	95	115
Mean annual precipitation (inches):	16	30

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.67	1.91	2.1	39.7
February	0.61	1.70	7.0	44.1
March	1.01	1.85	14.5	50.5
April	0.97	1.75	21.8	60.1
May	0.99	1.79	28.7	69.9
June	0.83	1.29	35.0	80.6
July	1.81	2.90	40.8	85.2
August	2.34	3.18	40.2	82.1
September	1.25	1.98	32.9	76.1
October	0.96	1.72	22.5	65.7
November	0.74	1.37	13.5	51.3
December	0.70	1.79	4.8	41.9

Climate Stations:

				Period		
Station ID	291664	Location	Chama, New Mexico	From: 01/01/14	To:	12/31/01
Station ID	292700	Location	Eagle Nest, New Mexico	From: 11/01/37	To:	12/31/01
Station ID	292837	Location	El Vado Dam, New Mexico	From: 09/01/23	To:	12/31/01
Station ID	297323	Location	Red River, New Mexico	From: 01/01/15	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site may be influenced by water from a wetland, spring or seep.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The soils are deep and somewhat poorly drained with a high water table. Depth of the water table ranges from 4 to 60 inches. The surface soil textures are loam, silt loam, silty clay loam or clay loam. Subsoils range from very gravelly loamy sand to clay. The soil profiles are characterized by high amounts of organic matter and dark colors. Permeability is moderate to slow. Runoff is medium and water-holding capacity is high.

Parent Material Kind: Alluvium
Parent Material Origin: Mixed

Surface Texture:

1. Loam
2. Silt loam
3. Silty clay loam
4. Clay loam

Surface Texture Modifier:

1. N/A
2.

Subsurface Texture Group: Loamy
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): 15 to 35
Subsurface Fragments >=3" (%Volume): 15 to 35

	Minimum	Maximum
Drainage Class:	Somewhat poorly	Well
Permeability Class:	Impermeable	Moderate
Depth (inches):	60	>72
Electrical Conductivity (mmhos/cm):	0.00	2.00
Sodium Absorption Ratio:	0.00	5.00
Soil Reaction (1:1 Water):	4.5	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	9	12
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
The plants characterizing this site are mid to tall bunchgrasses and sedges, which contrast strongly in appearance with sites adjacent to it. Shrubs may be scattered throughout the site but are a minor component. Forbs are not particularly noticeable except when in bloom

Canopy Cover:	
Trees, shrubs and half-shrubs (average)	3 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	65
Bare ground	5
Surface gravel	0
Surface cobble and stone	0
Litter (percent)	30
Litter (average depth in cm.)	10

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	2,160	2,655	3,150
Forb	168	207	245
Tree/Shrub/Vine	96	118	140
Lichen			
Moss			
Microbiotic Crusts			
Total	2,400	2,950	3,500

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	DECA18	Tufted Hairgrass	738 – 1,033	738 – 1,033
2	CANE2	Nebraska Sedge	295 – 590	295 – 590
	CAREX	Sedge spp.		
3	POPR	Kentucky Bluegrass	295 – 443	295 – 433
	POA	Bluegrass spp.		
	BRMA4	Mountain Brome		
	AGGI2	Red Top		
	PHAL2	Alpine Timothy		
4	FEOV	Sheep Fescue	148 – 295	148 – 295
	ACNEN2	Columbia Needlegrass		
5	ELTR7	Slender Wheatgrass	89 – 207	89 – 207
	PASM	Western Wheatgrass		
	MUWR	Spike Muhly		
6	JUNCUS	Rush spp.	0 – 207	0 – 207
	CACA4	Bluejoint Reedgrass		
	PHAU7	Reedgrass spp.		
7	AVSA	Oatgrass spp.	30 – 207	30 – 207
	ELCA4	Canada Wildrye		
	POFE	Muttongrass		
	2GRAM	Other Grasses		

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	TRHY	Alsike Clover	30 – 89	30 – 89
	VICIA	Vetch spp.		
	TRPR2	Red Clover		
	TRIFO	Clover spp.		
9	IRMI	Rocky Mountain Iris	59 – 236	59 – 236
	RATIB	Coneflower spp.		
	ACMI2	Western Yarrow (Common)		
	AGOSE	Dandelion spp.		
	RANUN	Buttercup		
	2FORB	Other Forbs		

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
10	DAFL3	Shrubby Cinquefoil	30 – 89	30 – 89
11	2SD	Other Shrubs	0 – 59	0 – 59

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species that could appear on this site include: meadow barley, rabbitfoot grass, prairie junegrass, spike trisetum, Arizona fescue, smooth brome, false hellebore, wild parsnips, thistle spp., wild rose and willow species.

Plant Growth Curves

Growth Curve ID **3305NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Mid and tall bunchgrasses with minor components of shrubs and forbs.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	5	10	25	30	15	7	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats which support a resident animal community that is characterized by raccoon, ermine, water shrew, meadow vole, western jumping mouse, song and Lincoln sparrows, leopard frog, tiger salamander and western territorial garter snake. Mule deer, elk, black bear and snowshoe hare use these sites seasonally. When permanent aquatic habitats occur, mallard uses these sites, teal, spotted sandpiper, snipe, killdeer and blackbirds.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	**Hydrologic Group**
Arosa	C
Roques	D
Tranquilar	C

Recreational Uses:

The visual qualities of this site are very pleasing, especially against a mountain setting. Due to the wetness of the site, recreational uses of the site are limited.

Wood Products:

No wood products are obtained from this site on a sustained yield basis.

Other Products:

Grazing:

Approximately 95 percent of the vegetation produced on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing pressure on this site may be a problem due to the lush vegetation as compared with adjacent sites. Water and salt should be distributed away from this site to prevent its constant overuse.

Animal gains on this site may be low during the growing season due to the high moisture-low fiber content of the forage.

The grazing of this site in conjunction with adjacent sites producing more fibrous forage will result in a better feed-to-gain ratio.

Deterioration of the potential plant community is indicated by a decrease in tufted hairgrass, red top, alpine timothy and sheep fescue. Species that increase includes sedges, rushes, meadow barley, Kentucky bluegrass, forbs and shrubby cinquefoil. A planned grazing system with periodic grazing and rest is best to maintain the natural balance between plant species and to maintain high productivity.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	**Ac/AUM**
100 - 76	0.6 – 0.9
75 – 51	0.9 – 1.3
50 – 26	1.3 – 2.6
25 – 0	2.6+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Tufted Hairgrass	Deschampsia caespitosa	EP	D	D	P	P	P	P	P	P	D	D	D	D
Kentucky Bluegrass	Poa pratensis	EP	P	P	P	P	P	P	P	P	P	P	P	P
Mountain Brome	Bromus marginatus	EP	D	D	P	P	P	P	P	P	P	P	P	D
Red Top	Agrostis gigautea	EP	D	D	P	P	P	P	P	P	D	D	D	D
Alpine Timothy	Phleum alpinum	EP	P	P	P	P	P	P	P	P	P	P	P	P
Sheep Fescue	Festuca ovina	EP	D	D	D	D	D	D	D	D	D	D	D	D
Columbia Needlegrass	Achnatherum nelsonii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Slender Wheatgrass	Elymus trachycalus	EP	D	D	P	P	P	P	P	P	P	P	P	D
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Clover	Trifolium spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P

Animal Kind: Wildlife
Animal Type: Elk

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Aspen	Populus spp.	L/S	U	U	U	U	U	D	D	D	U	U	U	U
Willow	Salix spp.	L/S	D	D	U	U	U	D	D	D	D	D	D	D
Wheatgrass spp.	Pascopyrum spp.	EP	D	D	D	P	P	P	D	D	D	D	D	D
Bromegrass spp.	Bromus spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Fescue spp.	Festuca spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Needlegrass	Achnatherum spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Orchardgrass	Dactylis glomerata	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sedge	Carex spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Rush	Juncus spp.	EP	D	D	D	D	D	D	D	D	D	D	D	D
Clover	Trifolium spp.	EP	P	P	P	P	P	P	P	P	P	P	P	P
Marigold spp.	Baileya spp	EP	U	U	D	D	D	D	D	D	D	D	D	U
Dandelion	Agoseris	EP	U	U	P	P	P	D	D	D	D	D	D	U

Animal Kind: Wildlife

Animal Type: Deer

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Water Birch	Betula occidentalis	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Aspen	Populus spp.	L/S	D	D	P	P	P	P	P	P	D	D	D	D
Elderberry (Blue)	Sambucus nigra	L/S	U	U	P	P	P	P	P	P	U	U	U	U
Wildbuckwheat	Eriogonum spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Fleabane	Erigeron spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Larkspur	Delphinium confertiflorum	EP	U	U	D	D	D	D	D	D	U	U	U	U
Astragalus	Astragalus spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Sweet Clover	Melilotus spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Lupine	Lupinus alpestris	EP	U	U	D	D	D	D	D	D	U	U	U	U
Penstemon	Penstemon spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Indian Paintbrush	Castilleja coccinea	EP	U	U	D	D	D	D	D	D	U	U	U	U
Dandelion	Agoseris spp.	EP	U	U	P	P	P	D	D	D	D	D	D	U
Geranium	Geranium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Aster	Aster spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U
Thistle	Cirsium spp.	EP	U	U	D	D	D	D	D	D	U	U	U	U

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites:

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **McKinley, Rio Arriba, Sandoval, Santa Fe, Taos**

Latitude:

Longitude:

Township:

Range:

Section:

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description:

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Southern Rocky Mountains 48 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Taos, Santa Fe, Rio Arriba, Los Alamos, and Sandoval county surveys.

Characteristic Soils Are:	
Arosa	Roques
Tranquilar	

Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	03/25/82	Don Sylvester	03/25/82

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	02/28/03	George Chavez	10/31/03